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FACTORS INFLUENCING THE UTILIZATION OF ADOLESCENT HEALTH CARE SERVICES AMONG SENIOR HIGH SCHOOL STUDENTS IN SUNYANI WEST DISTRICT

BY

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DECLARATION

I, LINDA DARKO YEBOAH, the author of this work under the supervision of Dr. Justice Moses K. Aheto of the Department of Biostatistics, School of Public Health, declare that with the exception of references to other people’s work which have been duly acknowledged, this is my own work. It has not been submitted in part or whole anywhere for any degree.

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DATE
DEDICATION

I dedicate this work to my lovely son Nana Yaw Adinkra Gyimah.
ACKNOWLEDGEMENTS

Glory be to God Almighty for seeing me through my academic work. A special thanks goes to my supervisor Dr. Justice Moses K. Aheto for his relentless support in this research especially in providing his knowledge and expertise to the success of this study. To my family and friends, words cannot express my gratitude. God bless you all!
ABSTRACT

Background
Adolescence is a period of transition from childhood to adulthood which encompasses both cognitive and physical development of an individual. During this critical period of growth, individuals are mostly faced with emotional and physical challenges which pose risks to their health and general wellbeing. Most often risky sexual behaviors and risky lifestyles are learned at this stage of life. Therefore, the study sought to explore the factors influencing the utilization of adolescent health care services among adolescents age 15-19.

Method
A cross-sectional study was conducted in Sunyani West District among Senior High School (SHS) students aged 15-19 years. With the use of a structured questionnaire, students were guided to respond to questions. A total of 286 participants were used. Chi-square test was used to test significant associations between utilization and categorical independent variables of interests. A multivariable logistic regression analysis was further carried out to determine factors that are independently associated with utilization. P-value below 5% was used to declare statistical significance.

Results
There was a moderate 43.2% awareness level of adolescent health care services among Senior High School Students aged 15-19 years in the Sunyani West District. However, the utilization of these services for the past 12 months was low (22.0%). The most common source of information for the services were school (47%), health care provider (33.1%) and friends (24.2%). Services often utilized by adolescents were counselling and information on reproductive health issues (85.7%), family planning and contraceptive services (14.3%), STI testing and treatment (12.7%). Little over forty percent (40.36%) of the respondents who did not utilize the service in the past
one year felt they had no reason to use the services. The remaining proportion (59.64%) had a reason to use the service but were constrained by factors such as family (18.92%), cost of services (18.47%) and health care provider characteristics (17.47%). The major factors influencing utilization of adolescent health care services from the respondents’ perspective were parental decision (40.9%) and influence from friends (38.1%). Females (OR= 2.88) were more likely to utilize adolescent health care services as compared to males. However, adolescents who were not sexually active were also less (OR= 0.28) likely to utilize the services.

Conclusions
Utilization of adolescent health care services is low in this study even though the awareness level is quite moderate. This depicts that awareness creation alone does not translate to utilization. Therefore, there is the need to address the mitigation factors and enhance the facilitators to utilization in order to bridge the gap for a successful adolescent health care program.

Key words
Adolescents, Utilization, Awareness, Reproductive health
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LIST OF ABBREVIATIONS

AHSPS – Adolescent Health Service Policy & Strategy

AIDS – Acquired Immune Deficiency Syndrome

ANC – Antenatal Care

FP – Family Planning

GHS – Ghana Health Service

GSS – Ghana Statistical Service

HIV – Human Immuno Virus

ICPD – International conference on Population Development

NGO – Non-governmental Organization

RH – Reproductive Health

SHS – Senior High School

STI – Sexually Transmitted Infection

WHO – World Health Organization
DEFINITION OF TERMS

Adolescence is a period of transition from childhood to adulthood

Adolescent is a person within the ages of 10 to 19 years

Puberty is the process of physical changes through which a child's body matures into an adult body capable of sexual reproduction.
CHAPTER ONE

1.0 INTRODUCTION

1.1 Background
Adolescence is the transitional period of growth and development between childhood and adulthood. The World Health Organization (WHO) describes an adolescent as a person between the ages of 10 and 19 years (WHO, 2001). This period introduces a distinctive stage of emotional, physical and psychological changes that puts their life at a risk (WHO, 2001). During this time emotional separation from parents which introduces personal values and self-sufficiency forces an adjustment on many adolescents. Also, the individual is faced with an upsurge of sexual feelings which they learn to control or direct (Newton & Harrison, 2005). Ghana is described to have a youthful population with 31.8% between the ages of 10 and 24 years (Ghana Statistical Service, 2012). This shows that the population of adolescents is found within this age bracket. Many a time adolescent within this transitional period feel shy to discuss with parents certain biological changes and sexual related topics which burdens their mind. Culture forms an integral part in nurturing young ones especially in Africa and Ghana where certain biological words are not mentioned as a child because it is seen unclean or not respectful to be mentioned. Parents therefore find it difficult to give sex education to their children and other reproductive health related issues. Adolescents at this crucial stage of their lives tend to rely on peers or trusted family members for information and clarification for sexually related issues or family conflict which might end up in an undesirable result (Tylee, Haller, Graham, & Churchill, 2007). Moreover, knowledge about how pregnancy could occur is inadequate among adolescents. 48% of adolescents have the view that a girl could not conceive if she had sex standing up (Awusabo-Asare, Kumi-Kyereme, Biddlecom, & Petterson, 2006).
Globally, adolescent pregnancy has become a challenge not only for mothers and children but the entire nation. Over the 300 million female young people worldwide, 16 million of them become mothers every year representing 11 percent of births recorded (Holness, 2015). Approximately 2.5 million young adolescent girls from age 15 to 19 years bear children yearly in developing countries (WHO, 2018). Ghana as a country and sub-Sahara Africa is no exception from this challenge. Nonetheless, the global adolescent birth has reduced over time from 65 per 1000 births in 1990 to 47 per 1000 in 2015. In spite of this remarkable progress globally, rate in Africa is 98 per 1000 births (UNITED NATIONS, 2015). Population of adolescents continue to grow hence projections have been made for an increase by the year 2030 globally with the largest proportions from West, Central, Eastern and southern Africa (Loaiza & Liang, 2013).

To tackle these challenges, the 1994 ICPD, advised nations to provide education and reproductive health services, awareness creation and information on sexually transmitted diseases to protect adolescents from unintended pregnancies and risk of infertility. This initiative should actively involve young men in reproductive health decision making and respect views of women in this aspect (Tobergte & Curtis, 2013).

Governments and non-governmental organizations have put in place measures and interventions to help curb this menace, yet the problem persist. Among the interventions is the incorporation of youth friendly corners or services into the health system to specifically address challenges with adolescent reproductive health and provide equitable, accessible, acceptable and effective health care to the youth (Tylee, Haller, Graham, Churchill, & Sanci, 2007). There have been numerous studies conducted to assess the perception and usage of adolescent-friendly facilities as an intervention. Adolescents’ non-use of appropriate health care services exposes them to diseases and other reproductive health problems.
A research conducted in Uganda, Malawi, Burkina Faso and Ghana on adolescent views and preferences for sexual and reproductive health services showed that adolescents find means to treat their health conditions through self-medication and visits to traditional healers. At the end, they make a decision to go to the hospital or formal sector when their disease condition or situation becomes worse (Wazen et al., 2014).

1.2 Problem Statement

Adolescent reproductive health has turned out to be a universal priority, specifically in many low and middle-income countries who seek to address the reproductive and total wellbeing of their adolescent population. The increase in adolescent risky sexual behaviors, drug abuse and pregnancies coupled with the acquisition of sexually transmitted infections brings to the fore both public health and social challenges that needs to be addressed.

In Ghana, sexual activity among adolescents and youth is increasing. In the period of 15 years the proportion of adolescent girls aged 15-19 having first sexual activity by 15 has increased by 61.6%; from 7.3 percent in 1998 to 11.8 per cent in 2014. Risky sexual behaviors are common among adolescents and non-adherence of condom use. Percentage of adolescent girls (15-19) never having sex has decreased from 62.2 percent in 1998 to 57.3 per cent in 2014; percentage of adolescent boys (15-19) never having sex has risen from 80.7 percent in 1998 to 73.4 percent in 2014 Ghana statistical Service et.al., (2015). Statistics also show that 14% of adolescent females (15-19) have begun childbearing, adolescents with live births 12% and 3% already pregnant with their first child (Ghana Statistical Service (GSS)/Ghana Health Service (GHS)/ICF International, 2018).

Adolescents who commence childbearing at an early stage have a higher tendency to quit school comparing them to their colleagues who delay childbearing. A research conducted by Ahorlu,
Pfeiffer, & Obrist, (2015) indicated that 16% of adolescents aged 15-19 years in their study were pregnant or already mothers. Most of these pregnant young ones dropped out of school however, the never pregnant ones were still in school. The argument then is if proper infrastructure and necessary actions were taken to protect these young girls would they have dropped out of school? On the other hand, how could those in school be protected so that they do not get pregnant and drop out of school like their counterparts facing health challenges out of early childbearing.

Additionally, adolescents who get pregnant are at risk of experiencing adverse pregnancy outcomes and their babies suffering the risk of diseases and death contributing to maternal and neonatal mortality and morbidity (Ministry of Health, 2016). The family health report of the Ministry of Health (2016), saw a decline in antenatal care of adolescents from 12.1 % in 2015 to 11.8%. Currently in Ghana only 31% of women who are married from the ages of 15-49 use any family planning (FP) method. Even though young people fear pregnancy, they have limited knowledge on contraceptive methods. Some adolescents can mention some contraceptive methods others also think anti-malarial and deworming tablets can prevent pregnancies which is not the case (Mbadu Muanda, Gahungu, Wood, & Bertrand, 2018). Non-use of contraceptives increases the chances of unwanted pregnancies and which mostly result in unsafe abortions. 25 million estimated unsafe abortion cases occur each year with the possibility of life loss highest in Africa. Africa alone records 13% of maternal deaths related to unsafe abortion (Singh & Maddow-Zimet, 2016).

Worldwide, an estimate of 10 million young men and women aged 10-24 are infected with HIV/AIDS. It is also valued that 15.2 million children have lost either one or both parents due to HIV (The Lancet, 2007). However, in Ghana the prevalence of HIV among age 15-19 is 0.3% (Ghana Statistical Service, 2015) and syphilis 1.1% (Ghana Health Service, 2016). More young
people are exposed to health conditions due to risky sexual behaviors, drug and tobacco misuse as a strategy to escape hopelessness and poverty especially in of low economic status. Statistics also show that behaviors initiated from childhood accounts for 70% of premature deaths among young people (Motuma, Syre, Egata, & Kenay, 2016).

In striving to meet the needs of the youth towards the Reproductive Health (RH) agenda as directed by the 1994 International Conference on Population Development (ICPD) and the sustainable development goal 2020, a 4 year Adolescent Health Service Policy and Strategy (AHSPS) has been advanced by the Ghana government to create a supportive and enabling environment that provides appropriate assistance and knowledge on mental health, nutrition, sexual and reproductive health, protection of young ones from all forms of violence and harmful practices that directly or indirectly affect their health (Ghana health service, 2016).

Despite the initiative by the government and Ghana Health Service (GHS), to address adolescent reproductive health problems through health systems strengthening by integrating adolescent health care services in the main-stream health care provision though not widely spread across the country due to financial constraints the few in existence remain underutilized. Adolescent health care service utilization has remained poor and there has not been a significant improvement to the access of suitable health information over the years.

It is therefore for this reason this research explored the factors influencing the utilization of adolescent health care services.
1.3 Research questions

The study seeks to answer the following questions:

1. What proportion of adolescents in Senior High School are aware of adolescent health care services?
2. What proportion of adolescents in Senior High School utilize adolescent health care services?
3. What are the factors that influence the utilization of adolescent health care services?

1.4 Objectives of the study

1.4.1 General objective

The main objective of this study was to assess the factors that contribute to the utilization of adolescent health care services among Senior High School students in Sunyani West District.

1.4.2 Specific objectives

1. To estimate the proportion of awareness of adolescent health care services among adolescents in Senior High School.
2. Determine the proportion of adolescents in Senior High School who utilize adolescent health care services.
3. Identify the factors that influence the utilization of adolescent health care services.
1.5 Significance of the Study

In the last few decades many researchers have tried to come out with means of improving adolescent health care services worldwide. In Ghana studies on the utilization and its associated factors are limited. However, one has to bear in mind that before we improve upon the services and get adolescents patronizing facilities for desirable results, there is the need to examine the situation on the ground to assess from the adolescents’ perspective who are the end users of the services to contribute to the process. Underutilization of reproductive health care services by youth put them at risk of health challenges. Utilization of these services require voluntary participation; however, there could be a number of reasons that influence the youth who are most likely not to use reproductive health care services. This will enable the researcher to get firsthand information and make informed recommendations that will contribute to the enhancement of systems and the health of this group of persons. The government, Ghana Health Service and other stakeholders could benefit from this knowledge to help allocate and invest resources into relevant areas or aspects of health care service delivery that will improve the health of adolescents and help meet their needs. In this way barriers brought out can be eliminated and facilitators strengthened for a desirable outcome.
1.6 Conceptual Framework

**FACTORS INFLUENCING THE UTILIZATION OF ADOLESCENT HEALTH SERVICES**

**Predisposing factors**
- Age
- Sex
- Religion
- Level of Education
- Parental Co-residence
- Ever had sexual intercourse
- Awareness of reproductive health service

**Enabling Factors**
- Cost
- Health Insurance
- Waiting Time
- Health Care provider attitude
- Privacy
- Confidentiality
- Distance to health facility
- Sex of health worker
- Availability of health personnel
- Opening and closing time
- Type of facility
- Parental Consent

**Need Factors**
- Counselling
- Abortion/Post Abortion care
- Family planning
- STI Treatment
- HIV Counselling and testing

**Figure: 1 Adapted from (Andersen, 1995)**

The independent variables influencing the outcome variable of interest that’s the utilization of adolescent health care services can be grouped into 3 main parts. The predisposing factors, enabling factors and need factors.
Predisposing factors include age, sex, religion and educational level. The Enabling factors comprise cost incurred during service delivery, health insurance acceptance and the extent to which it could be of help, time spent in the facility, health personnel availability, distance from the facility to their homes, closing and opening time of the facility, health provider attitude, privacy, confidentiality, parental consent and the nature of health care system operations. Need factors also influence the utilization of a service. Perceived need for health care service is important people may choose to use a facility or services as at when the need arises. This could be general counseling, abortion and post-abortion care, STI treatment, HIV/AIDS counseling and testing and family planning.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter critically examines theoretical data in addition to information from works undertaken by others as well as data from other concerning the subject matter. Literature was reviewed on adolescent awareness on adolescent health care services available to them, the utilization of reproductive health services by adolescents and factors which influence the utilization of these services as a composite of barriers and facilitators.

Major physical, mental and social development occur during adolescence (Vingilis, Wade & Seeley, 2017), these young ones have prominent health care needs related to this crucial period of transition in their lives which are not often met. In view of this, adolescent health care services are instituted to address adolescents’ distinct health needs of. These services provide reproductive health information, family planning, contraceptives, voluntary HIV counselling and testing, antenatal and post-natal care, treatment of sexually transmitted diseases, pre-abortion counselling and care. Avoidable health conditions arise among young people as a result of the non-use these services which could be managed if detected on time (Heflinger & Hinshaw, 2010). Although Ghana has a health policy which is directed towards the improvement of adolescent health through friendly health corners these services are scarce. Nonetheless, the awareness and utilization of these scarce services provided is low (Ministry of Health, 2016).

2.2 Awareness of Adolescent Reproductive Health Services

Awareness of reproductive health care services plays a key role in its utilization. Studies have shown low levels of awareness and knowledge on adolescent reproductive health care services.
The awareness levels of these services vary from one geographical location to the other with reasons yet to be determined. A research carried out in rural India on the incorporation of adolescent-friendly health services into the public health system, indicated that 82.3% of their respondents in Arajiline and 97.2% of those in Hosakote were aware of the ASRH clinic. Out of these, most of the adolescents in both districts were aware of the site of clinic (Mehra, Sodarwal & Chandra, 2013). Conversely, another study in Ethiopia found out that, only (31.6 %) of their respondents were knowledgeable about the available adolescent reproductive health services at the health facilities. About one in five (18.1 %) of the youth never named any adolescent reproductive health service while half (50.3 %) of them reported only one component of the services. Most of the participants, (72.4 %), had information about adolescent reproductive health services mainly from radio advertisements and school teachers. Besides most of them thought that adolescent-friendly services were essential for young people. (Motuma et al., 2016).

Additionally, a research carried out in south-eastern Nigeria using the Anderson’s model to examine the use of services by adolescent girls showed that, only 38% of the respondents were aware of the existence of any reproductive health facility or service (Azfredrick, 2016). Adolescents’ awareness to the use of health care services is a predisposing factor. The awareness of services is likely to affect the utilization. On the other hand, a similar study conducted in Nekemte reported that, 73.6% of their respondents were aware of at least one facility where they could access sexual and reproductive health care. Examples of facilities cited were Government facilities, Non-governmental organization facilities, private facilities and traditional facilities (Binu, Marama, Gerbaba, & Sinaga, 2018). Awareness of adolescent health care services varies from one geographic location to the other depending on the amount of work put in place to create awareness and stimulate the interests of young adults to patronize the services. To promote
awareness, circulation of flyers and leaflets with information and websites on adolescent friendly services in schools could help. Adolescent friendly services therefore need financial support and assistance to publicize their activities and promote benefits which will promote access to services. These measures will help in the attainment of the millennium development goal 5b of increasing access to reproductive services by adolescents.

2.3 Utilization of Adolescent Friendly Services

To prevent adolescents from acquiring different sexual and reproductive health challenges, the utilization of reproductive health services is crucial. Ghana Statistical Service, (2015) reports a low use of contraceptives (19%) among females age 15-19 years.

The most common family planning method used among sexually active unmarried women, most of them being young are the male condom and pill (8% each). Injectables and rhythm method constitute 7% each, and implants 5%. However, sexually active unmarried women patronize the traditional method more 13% as compared to unmarried women currently 5%.

Adolescents who utilized services sought for treatment of sexually transmitted diseases and other health conditions. A survey in Ethiopia showed that, the most essential element of adolescent friendly services utilized by the youth were STIs including HIV/AIDS (57.4 %) and counseling services (44.7 %) (Motuma et al., 2016). Also, they mentioned STIs (54.9 %) and counseling (37.2 %) as the actual adolescent friendly service given at the health institutions. Almost 70 % of the respondents testified that the young people needed to obtain vital information, education and communication on reproductive health at the age of 15 years and above. The youth reported unwanted pregnancy (72.4%) as a major reproductive challenge, STIs/HIV/AIDS (49.8%), unintended sexual intercourse (43.5%), and abortion (34.5 %). Three in four (74 %) of the young people specified that adolescents should be involved in decision making concerning their own
reproductive health challenges. Though 82.2% of the youth reported that they were not aware of the location of adolescent reproductive services are delivery, only 63.8% of them reported that they used the services at least once in the past one year before the survey. The findings of Justine, Edgar, Peter, Christine, & Lynn, (2017) revealed that, a greater percentage of boys (79%) than girls (21%) pursued medical care for STIs. However, the percentage of girls requiring treatment for STI was higher than the boys in the older age group. About 23% adolescents sought post abortion care in the survey. Library services, counseling, education and information on reproductive health were the most patronized services in reproductive friendly corners.

However, some adolescents feel reluctant to use reproductive health services because they feel afraid, lack of preferred services, fear of side effects of family planning commodities, inconvenient services hours, lack of privacy and confidentiality, religious opposition, judgmental attitude of health care providers, cost of services and opposition from sexual partner. Also with problems concerning STIs, some adolescents never sought diagnosis or treatment even though they experienced some symptoms. Their reasons for not seeking medical attention were because they were afraid, services were expensive and inconvenient working hours (Negash et al., 2016). Adolescents may tend to exhibit this behavior due to absence of trust and fear as a result of cultural norms and values.
2.4 Factors influencing the utilization of adolescent reproductive services

2.4.1 Introduction

There is a broad disparity between the type of services required by young people from primary healthcare providers and the actual major disease burdens they encounter (psychological challenges, STIs etc). In the quest to understand the obstructions the youth encounter in accessing health care, intense work and attention has been geared towards this area. Evidence has been gathered in the past two decades in defining these obstacles. Studies include systematic reviews (Health, Abraham, Yitbarek, & Morankar, 2019), large cross-sectional surveys (Moise, Verity, & Kangmennaang, 2017), studies using mixed methods (Motuma, Syre, Egata, & Kenay, 2016), and well-designed qualitative studies (Nash et al., 2019). Investigations have also been carried out on the barriers observed by those providing services to the youth (Mugore, 2019). Studies worldwide point out that young people are usually reluctant or incapable of accessing the necessary health services, which address these setbacks. These challenges range from problems with access to confidentiality of the services provided to knowledge of existence of services in terms of, place and distance which empowers adolescents to make informed decisions and also promote access of reproductive health services (Adebisi & Olanrewaju, 2019).

2.4.2 Availability of Reproductive Health Services

The existence of primary health care services in developing countries remains a challenge. According to Ghana Health Service, (2016), a total of 291 adolescent health centers have been established in public (276) and private (15) facilities. This was established in partnership with NGO’s such as Marie Stopes international, Palladium and other stake holders to meet the needs of adolescents. However there is a challenge of the absence of youth corners in many facilities in Ghana, even with the existing ones the functionality of most of them is questionable.
Furthermore, for some reasons, accessibility may be restricted even if the health services are present particularly distance and privacy (Justine, Edgar, Peter, Christine, & Lynn, 2017). For example, health facilities might be situated in locations farther away from the residence of the youth, their work places, school, or work may have unfavorable opening and closing hours. (Aninanya et al., 2015). Adolescents are then torn to decide whether to skip classes hours to assess reproductive health care or close from school to attend which might not be a favorable time for many reasons. According to Justine, Edgar, Peter, Christine, & Lynn, (2017), most facilities were located 5 kilometers away from public transport stop and young people wished to use services between the hours of 1:00pm and 5:00pm while others preferred between 17:00 and 20:00 hours, However, majority of the services provided ended between 4:00pm–6:00pm with no separate hours for adolescents. No health worker agreed to having separate hours for adolescents in their facility.

According to WHO (2002), lack of publicity and visibility also serves as a barrier. Some reproductive health corners may not be sited in places where adolescents can easily locate. Adolescents may also not access the services available because of inadequate knowledge and are ignorant of the kind of services provided at the facilities. Even though they might have challenges they may not know they could be helped in the friendly corners.

2.4.3 Age

There is a predicted odds with the age of adolescents and the utilization of reproductive health services. A research conducted by Negash et al., (2016) on reproductive health utilization and its associated factors found out that utilization of services was influenced by socio-demographic variable like age. This study indicated that adolescents 19 years or less were more likely to use voluntary counselling and testing services than those aged 20-24 years. On the other hand, a
study in Uganda showed that, a larger proportion of boys less than 15 years (79%) sought for STI treatment as compared to girls (21%). However in the older age group more girls patronized STI services as compared to boys (Justine et al., 2017).

2.4.4 Cost of Services Provided
There are considerable number of youth who do not use youth-friendly services due to many reasons like cost of services (Negash et al., 2016). Adolescent health care services rendered in many developing countries often curtails the availability of affordable services due to the absence of sufficient financial reimbursement of providers to deliver relevant and appropriate services to young ones. In Ghana, reimbursement of health insurance has become a huge challenge to the delivery of health care services. Adolescents at this age do not work hence will not be able to afford expenditure at the friendly corners especially when they do not have parental consent therefore high cost of service may influence the utilization (Singh, Rai, Alagarajan, & Singh, 2012). With the assumption that adolescents may not have the requisite capital or resources to afford quality services even if they are aware of it because they do not work, parental decision could affect the awareness and access to health care. Consequently, involving parents in the lives growth of their children may support them to find quality health care and treatment.

2.4.5 Privacy and Confidentiality
Even though adolescent health care services may be present and accessible, they might not be acceptable to young people. Uncertainty surrounding confidentiality is a key factor for the unwillingness of adolescents to seek help. For instance, the possible shame attached to being seen around an adolescent health care center prevents young people from visiting and using the services. The lack of privacy at delivery points in various adolescent health centers deters young
people from using the services (Binu et al., 2018). Most often young people harbor fear when visiting the services because their parents or guardians may find out the reason for their visit. In a study conducted in rural India, adolescents pointed out that there were other people or staff present when been attended to by a doctor. There is the need for facilities to provide privacy during their visits, either by providing physical barriers between counseling and clinical spaces, or by any other effective arrangement. However, a survey conducted in Uganda Wakiaso district on the readiness of health facilities to provide adolescent reproductive health services to young people reported that infrastructure to ensure privacy in majority of the health care centers were absent for young girls and boys. Only one higher order facility was reported to have a demarcated area to deliver services to the youth. Even with this, no health center had a special waiting room for the youth to provide care without the interference of other workers (Justine et al., 2017).

2.4.6 Perceptions

Perceived thoughts and fears harbored by adolescents act as a restrain to the utilization of services. This feeling of discomfort is sometimes perceptions or information from other people or attitude of the larger populace. A study carried out by Motuma et al., (2016) revealed that, some adolescents felt they would be asked their marital status if they decide to go in for family planning which they find embarrassing since most of them might not be married by then. In addition, one was with the view that family planning wasn’t meant for adolescents but rather adults. He advised that the youth should be educated on family planning and let them know it is for only married couple and therefore practice abstinence. Such perceptions make it difficult on the part on care givers deliver family planning services to the youth. In the same study, a health care provider expressed his uneasiness in giving a contraceptive to a 13 year old girl. Perceptions
on the part of youth and the care givers together becomes a mitigating factor to adolescent health service utilization.

2.4.7 Family and Culture

For example, in places or societies where culture and norms restrict young people from premarital sex, it will abominable and a disgrace to identify your adolescent child going such an act. Topics of sex are not even discussed at home with children let alone practicing it. As a result of this, adolescents with sexual problems like genital sores or unwanted pregnancies are likely to try resolving these problem themselves, speak with siblings they trust or friends or purchase drugs pharmacies, attend clinics which are not close to their places of residence. In some cases, secrete abortion services are rendered for adolescents by health care providers illegally. Moreover, young adults feel uncomfortable and reluctant to talk about reproductive health problems. In many cultural settings, due to cultural and religious conservation, open deliberation on reproductive health issues with parents and other substantial people are minimal. Due to this reason, young people are not equipped with the required information concerning their reproductive health needs and difficulties. Majority of these dialogues take place between the adolescents and family only after certain reproductive health problems have happened. Many of these parents feel uncomfortable, awkward and not well prepared to discuss reproductive health concerns with their wards. This makes adolescents have inadequate knowledge and skills to make informed decision and seek contraceptive or other reproductive health services. (Motuma et al., 2016). Moreover, (Agampodi et al., 2008) revealed that negative attitudes of parents, teachers and the society served as a barrier to health care which was reported by many adolescent girls. They claimed many of their parents treated them as children. Some young girls perceived that their parents felt nothing wrong with having premarital sex. Parents sometimes tried to do
away with their adolescent girls by allowing them to engage in sexual intercourse and thereafter handing them in to proceed with teenage marriages. In most cases, victims of these circumstances feel abused at an older age. Even though some girls accepted this guilt others also opined that the parents were to be answerable for problems related to early sex and marriages. Boys however had a view contrary to this. They felt adolescents themselves must be blamed and held responsible for such acts rather than parents.

2.4.8 Health care providers

Some adolescents feel shy to expose their private parts and will therefore keep to themselves if they have any problem pertaining to their reproductive organ. Due to inadequate training of health care providers in properly interacting with adolescents and their parents or in negotiating private time with the adolescent so that confidential issues could be discussed without the presence of the parent pose a challenge. Sometimes the few trained ones are transferred in and out of facilities. On the other hand, health personnel proving services to adolescents adolescent explained that although reproductive health care needs of young ones are enormous and impediments exist in the access to health services. When adolescents successfully pass through all hurdles to access services at the health centers, it is imperative health care providers assist them in making the right decisions. The knowledge and belief of practitioners influences the services the adolescent may utilize as well as the kind of information he or she may attain. In some instances, health care providers use personal sentiments to provide counselling services for clients or based on personal experiences. The sex of the service providers also influences the utilization of adolescent friendly services (Motuma et al., 2016). Young people may find it difficult in expressing themselves to the opposite sex as compared to health care providers of the same sex.
2.4.9 Health Care Environment

The incorporation of recreational or sport facilities and libraries or internet within youth centers were relevant to some young people. The fear of public attitude or reaction will be minimized beyond being source of information when such facilities are in existence. Adolescents can take their books to the health center and receive health care but the public will think he or she went to the library. Some private hospitals which have such facilities which attract adolescent’s more than public hospitals where there are no such recreational facilities. Improving the understanding of common RH problems, communication skills and experience sharing could be enhanced with the presence of these recreational facilities which adolescents could learn from (Motuma et al., 2016). Also, Oruche, Downs, Holloway, Draucker, & Aalsma, (2014) & Schriver et al., (2014) showed that the time spent in the hospital influenced the use of reproductive health services by adolescents. When health centers become crowded, adolescents find it difficult to wait. Even though services might be available, accessible, and acceptable they might not be necessarily equitable. Dissatisfaction arises when young people seek help and are not pleased with the services provided, when this happens they often don’t return to the clinics the next time. (Katz & Nare, 2002). Clinicians and public health experts are working hard to safeguard the prevention of diseases through primary interventions realizing the need to eliminate the challenges associated the delivery and use of adolescent health care services which will help redeem the undesirable perception and image of health facilities to a one that is warm and user-friendly.

Conclusion

The contributing factors to utilization of adolescent health care services discussed above either positively or negatively affects the adolescents depending on the context as well as the location
of these young ones. Some variables are significantly associated whiles others do not tell any level of significance. However if proper measures are put in place, success could be achieved in promoting utilization and awareness of adolescent health care services by taking factors influencing them into consideration which are the predisposing factors, enabling factors and need factors as categorized by Anderson (1995) which includes the health care environment, family and culture, attitude of health care providers privacy and confidentiality, age and cost of services.
CHAPTER THREE

3.0 METHODOLOGY

This chapter consists of the method that was employed in the study. This includes study design, study population, sample size, sampling techniques, data collection technique and tools, ethical considerations, data processing and analysis.

3.1 Study Design

A cross-sectional study method was employed for quantitative data collection to determine the proportion of adolescents in senior high school who were aware of adolescent health care services available to them, estimate the proportion of adolescents in senior high school who utilize adolescent health care services and identify the factors that influence the utilization of adolescent health care services.

3.2 Study Area

Sunyani west district geographically lies between latitudes 7° 19´N and 7° 35´N and longitudes 2° 08´ W and 2° 31´ W and shares boundaries with Wenchi Municipal to the North, Offinso North to the East, Sunyani Municipal to the South, Berekum Municipal to the West, Dormaa Municipal, Dormaa East to the South-West and Tain District to the North-West. It has a total land area of 1,059.33square kilometres, the District occupies 4.2 percent of the total land area of the region.

The Sunyani West District has a total population of 85,272, which constitutes 3.7 percent of the Brong Ahafo Region’s population. There are more females (43,884) than males (41,388) in the District. The sex ratio is 94.3 (i.e., about 94 males to 100 females), which means that females are about six percent more than males. Adolescents age 10-14 are 106,180 (12.4%) and those aged 15-19 and 8958 (10.5%) making a total of 24.9% of the district’s population.
The predominant ethnic group in the district is Bono and Banda. The main occupations of the people are farming and trading. Small-scale businesses forming part of the manufacturing sector employs part of the population in agro-food processing, brick making, processing of wood, metal fabrication and carpentry.

The District has educational institutions for all the levels, namely 65 kindergartens, 68 primary schools, 43 basic schools, 2 technical/vocational schools, 5 senior high schools and 2 universities; Catholic University College of Ghana and University of Energy and Natural Resources.

The district provide health services to its inhabitants through both public and private facilities. These facilities comprise, Community based Health Planning and Services Compounds (CHPS), clinics and maternity homes. The facilities are distributed across the district as follows: There are 5 health centres, one in each of the following settlements namely Fiapre, Chiraa, Nsoatre, Kwatire, and Boffourkrom; 2 private clinics at Odomase and Chiraa, 7 functional CHPS zones at Atoe and Dumasua; and 3 maternity homes at Nsoatre, Odomase and Dumasua.

There are 3 functional adolescent reproductive health services in the district which are located at Chiraa, Nsoatre and Kwatire health centres.
Figure: 2 Map of Brong Ahafo Districts

(“Creation of new regions: Brong Ahafo in perspective - Graphic Online,” n.d.)
Figure: 3 Map of Sunyani West District

(GSS Report, 2015)
3.3 Variables

3.3.1 Outcome Variable

The primary outcome variable in this study was utilization of the adolescent health care services which was measured as whether the student visited any adolescent health care services in the past 12 months. This was measured through a dichotomous answer (yes or no). A “yes” answer was further validated by asking the type of service patronized which includes counselling, STI testing and treatment, pregnancy care etc. After the validation a “yes” answer was considered as utilization. Adolescent health care services are services designed to examine the health status of adolescents providing them with equitable and accessible health care. These services include STI testing and treatment, family planning, abortion and post abortion care, general counselling etc.

3.3.2 Explanatory Variables

The explanatory variables that was considered as determinants of utilization of adolescent health services were; predisposing factors (Age, sex, class/level, religion, co-residence), enabling factors (awareness, parental support, health insurance, cost, timing, waiting time, waiting area, attitude of health care providers, distance of service from home, privacy and confidentiality, sex of health care provider) and need factors (perceived need or reason for attendance). These variables may serve as a facilitator for utilization as well as a barrier.

3.4 Data Collection Techniques and Tools

A structured questionnaire with both closed and opened ended questions was administered to participants. The questionnaire had three sections titled sections 1, 2 and 3. Section 1 covered the socio-demographic information of participants, Section 2 addressed the awareness of adolescent
health care services, whereas Section 3 responded to the utilization of adolescent health care services.

The first part of the questionnaire provided spaces for awareness, utilization and reasons for utilization. The second part also provided spaces for participants who haven’t utilized adolescent health services and their reasons for that. The participants were guided to self-administer the questionnaires.

3.5 Sampling Method

A random sampling method was employed to select 3 schools out of the five senior high schools in the district. The schools randomly selected were Chiraa SHS, Odumaseman SHS and Sacred Heart SHS. The number of students aged 15-19 years was retrieved from the schools selected. A proportionate sample size was then allocated to the three schools to select the participants for a true representation of proportion. Stratification on the levels or based on classes was done to randomly select students so that every level is represented in the study. On the day of the data collection students were asked to remain in their classroom to be selected by lottery method using their attendance list.

3.6 Study Population

The study population was adolescents aged 15 to 19 years in Sunyani West District in Senior High School.

3.7 Inclusion and exclusion criteria

3.7.1 Inclusion criteria

Adolescents aged 15 to 19 years in Senior High School were selected to participate in the study.
3.7.2 Exclusion criteria

Students below age 15 and above age 19 were exempted from the study. Students between the ages of 15 and 19 who qualify to participate in the study but were severely sick were also excluded.

3.8 Sampling Procedures

3.8.1 Sample size calculation

The sample size for this study was determined by taking into consideration the following factors:

An estimated proportion of the outcome variable (utilization of the services) a study conducted in Nekemte town Ethiopia reported a utilization of sexual reproductive health services as (21.2%) (Binu, Marama, Gerbaba, & Sinaga, 2018).

An assumption of 95% confidence level (level of significance, za =1.96), 5% margin of error and 10% non-response rate was used to determine the sample size.

Using the Cochran (1997) formula  
\[ n = \frac{Z^2 \times p \times (1-p)}{d^2} \]
where  
\[ Z = \text{critical value on standard normal distribution at 95\% confidence interval (1.96)} \]
\[ p = \text{patronage (proportion (21.2\%) of population who had ever used the services from literature (Binu et al., 2018).} \]
\[ d = \text{margin of error or level of precision (5\%)} \]

\[ n \geq \frac{1.96^2 \times 0.212 \times (1-0.212)}{0.05^2} \]

\[ n \geq 256.7, \text{ rounded off to } n = 257 \]
Assuming 10% attrition rate, we had a final sample of 257/(1-0.1) = 286. Thus, a total sample of 286 was recruited for this study.

3.9 Ethical Considerations
Ethical clearance was sought from the Ethical Review Committee of the Ghana Health Service, Research and Development Division, Accra. Permission was taken from the head teachers of the schools selected. Head teachers of the schools were given an informed consent form to sign on behalf of the parents of adolescents aged 15 to 17 years. It is assumed that the school takes responsibility of students when in school. Adolescents will also have the right to decide to be part of the study or not therefore they were also given assent forms to sign to be part of the study. Those aged 18 and 19 were given consent forms to sign for themselves.

3.10 Study Procedure
The objective of the study was explained to all participants of the study. Adolescents considered to take part in the study were those who voluntarily agreed to participate in the study by signing a consent form as well as adolescents who whom the school authority consented on their behalf because they were below 18 years. The researcher distributed questionnaires to respondents and assisted them in explaining technical terms which students might not be familiar with.

Privacy and Confidentiality
All participants were assured of privacy and confidentiality in answering the questions. Identification codes were given to participants to ensure anonymity. Responses gathered from them were not shared with anyone and were kept under lock and key except for principal and research supervisor if requested.

Informed Consent/Assent
Consent forms were given to adolescents aged 18 and 19 years. The head teachers signed an informed consent form on behalf of parents to enable adolescents 15 to 17 years participate in the study.

**Conflict of Interest**

There were no conflicts of interest for this study.

**Possible Risks/Discomfort**

Adolescents may feel a bit of discomfort in answering certain personal or sensitive questions in this study which presented minimal risk. However, it was explained to adolescents that they had the right to decline to the study even at the middle of answering the questions when they experience any form of displeasure. Thus, a respondent could voluntarily decline to answer a particular question at any time.

**Compensation**

There was no compensation of any form available to the participants.

**Possible benefits**

The study had no direct benefit for the participants, but the results obtained from it will be recommended to policymakers and stakeholders who will use it in improving the adolescent reproductive health services in the Sunyani West District.

**Voluntary participation**

It was explained to all participants that the study was voluntary hence decision to exit the study was allowed at any point in time.
3.11 Data Collection
Information was collected by the principal investigator. This was done using structured questionnaires which was self-administered.

3.11.1 Quality Control
To produce a quality work, a well-designed structured questionnaire was developed with relevant questions geared towards the achievement of the study objectives. All answered questionnaires were checked vigilantly on daily basis by the principal investigator for completeness, accuracy and consistency. Editing, validation, coding and recoding was done to ensure a quality input and output.

3.12 Data collection and analysis
Data entry was carried out in excel and analysis was done using Stata version 15.0. Data were summarized using frequencies and their associated percentages for qualitative variables while mean and their associated standard deviations were used to summarize quantitative data. Logistic regression was used to investigate the association between dependent and independent variables. A P-value less than 0.05 (p < 0.05) was used to indicate statistical significance.
CHAPTER FOUR

RESULTS

4.1 Socio-demographic characteristics of respondents

A total of 286 adolescents aged 15-19 years in Senior high school in the Sunyani West District participated in the study with a 100% response rate. The mean age of the participants was 17.11 with a standard deviation of 1.02. Adolescents aged 15, 16, 17, 18, and 19 years formed 5.59%, 22.73%, 34.27%, 29.72% and 7.69% respectively of the study. Over half of them (52.1%) were females and 47.9% were males. A larger percentage of the respondents were Christians (87.41%), Islam formed 11.89%, traditionalist 0.35% and other religion 0.35%. Adolescents in SHS 1, 2 and 3 respectively were 48.95%, 39.16% and 11.89%. More than half (58.39%) of the respondents lived with both parents, 30.07% lived with their mothers, a few (5.59%) of them with their fathers. About 68.53% of adolescents who participated in the study had health insurance, 13.64% had no health insurance and 17.83% of them had their insurance expired at the time the study was conducted. Out of the 286 adolescents who took part in the study, about half (50.35%) of them were sexually active. Out of the number that were sexually active, 50.69% were males and 49.31% were females. About half (49.65%) of them were not sexually active (Table 1).

4.2 Awareness of adolescent health care services

Less than half (43.36%) of adolescents were aware of any adolescent health care services while most of them were not aware of any adolescent health care services available to them. Meanwhile, the greater proportion (76.8%) of those who knew the presence of adolescent
services could indicate where it was located while 23.2% of them even though were aware of the services did not know where the services were located. Adolescent health care services less than 1-hour way from the home of respondents were 61.46%. Furthermore, 38.54% of the services were more than an hour away from the homes of the respondents.

4.3 Utilization of adolescent health care services

Only 22.03% of the respondents had utilized any adolescent health care service in the past one year while the remaining 77.97% had not utilized any adolescent health care service. Out of the proportion that utilized the services, 31.75% were males while 68.25% were females. Also, 61.9% of the services were public facilities and 38.1% were private.

Table: 1 Background characteristics of respondents

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency/means±sd</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of respondents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>16</td>
<td>5.59</td>
</tr>
<tr>
<td>16</td>
<td>65</td>
<td>22.73</td>
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<td>17</td>
<td>98</td>
<td>34.27</td>
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<tr>
<td>18</td>
<td>85</td>
<td>29.72</td>
</tr>
<tr>
<td>19</td>
<td>22</td>
<td>7.69</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>137</td>
<td>47.9</td>
</tr>
<tr>
<td>Female</td>
<td>149</td>
<td>52.1</td>
</tr>
<tr>
<td>Religion</td>
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</tr>
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<td>Christianity</td>
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</tr>
<tr>
<td>Islam</td>
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<td>11.89</td>
</tr>
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<tr>
<td>Others</td>
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<td>0.35</td>
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<tr>
<td>Class</td>
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<tr>
<td>SHS 1</td>
<td>140</td>
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<tr>
<td>SHS 2</td>
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<td>39.16</td>
</tr>
<tr>
<td>SHS 3</td>
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<td>11.89</td>
</tr>
<tr>
<td>Co-residence</td>
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<td></td>
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<td>Mother</td>
<td>86</td>
<td>30.07</td>
</tr>
<tr>
<td>Father</td>
<td>16</td>
<td>5.59</td>
</tr>
<tr>
<td>both parents</td>
<td>167</td>
<td>58.39</td>
</tr>
<tr>
<td>Others</td>
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<td>5.94</td>
</tr>
<tr>
<td>Health insurance</td>
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</tr>
<tr>
<td>Yes</td>
<td>196</td>
<td>68.53</td>
</tr>
<tr>
<td>No</td>
<td>39</td>
<td>13.64</td>
</tr>
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</table>
Table: 1 Background characteristics of respondents (cont’d)

<table>
<thead>
<tr>
<th></th>
<th>Sexually active</th>
<th>Awareness of adolescent health care service</th>
<th>Location</th>
<th>Distance</th>
<th>Utilization in the past one year</th>
<th>Nature of facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>144</td>
<td>Aware</td>
<td>Yes</td>
<td>&lt;1hour</td>
<td>Utilized</td>
<td>Private</td>
</tr>
<tr>
<td>Not active</td>
<td>142</td>
<td>Not aware</td>
<td>No</td>
<td>&gt;1hour</td>
<td>Not utilized</td>
<td>Public</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

4.4 Awareness of adolescent health care services

Figure 4 depicts the awareness level of adolescents on the availability of adolescent health care services. Less than half (43.4%) of the respondents were aware of any adolescent health care service while the majority (56.6%) were not aware of any adolescent health care service. Meanwhile, 44.35% of students who were aware of the services were males while 55.65% were females (Table 2).
Table 2: Sex distribution of sexual activity, utilization and awareness

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sexually Active</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>73 (50.69)</td>
<td>71 (49.31)</td>
</tr>
<tr>
<td>Not active</td>
<td>64 (45.07)</td>
<td>78 (54.93)</td>
</tr>
<tr>
<td><strong>Utilization</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilized</td>
<td>20 (31.75)</td>
<td>43 (68.25)</td>
</tr>
<tr>
<td>Not utilized</td>
<td>117 (52.47)</td>
<td>106 (47.53)</td>
</tr>
<tr>
<td><strong>Awareness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aware</td>
<td>55 (44.35)</td>
<td>69 (55.65)</td>
</tr>
<tr>
<td>Not aware</td>
<td>82 (50.62)</td>
<td>80 (49.38)</td>
</tr>
</tbody>
</table>

Figure 4: Awareness level
4.5 Source of information

A greater proportion (47.6%) of adolescents had their source of information concerning adolescent health care services from school, health care providers (33.1%), friends (24.2%), parents (14.5%), media (12.9%), church (8.1%) and a few from the mosque (1.6%) (Figure 5).

![Source of information](image)

**Figure: 5 Source of information**

4.6 Services offered in adolescent health care centers

Most adolescents (60.8%) identified general counselling as a service rendered in the adolescent health care. Family planning services (including condoms) formed 36.8% of the responses, HIV testing and counselling (32%), STI testing and treatment (26.4%), abortion and post abortion care (22.4%) and ANC services (3.2%). However, 10.4% of the respondents had no idea about the services offered at the adolescent health care centers (Figure 6).
4.7 Discussion of adolescent health care services.

The majority 62.8% of adolescents who were aware of adolescent health care services discussed with their peer group. Less than a third (27.5%) of them discussed the services with their parents, some with their sexual partners (16.7%) while a few discussed with their teachers (14.7%) (Figure 7).
4.8 Utilization of adolescent health care services

Out of the 286 adolescents who participated in the study, only 22.0% had utilized any adolescent health care service in the past one year. The remaining 78.0% had not utilized any adolescent health care service in the past one year for many reasons (Figure 8).
4.9 Purpose for utilization

As counselling been the most identified service, so it has been one of the major reasons why adolescents patronize adolescent health care services. A larger proportion of respondents 85.7% used services for counselling and information on reproductive health purposes. Family planning and contraceptive services was 14.3%, STI testing and treatment 12.7%, HIV counselling/testing and pregnancy test both formed 11.1% each as a reason for utilization. The remaining respondents utilized the services for pregnancy care and abortion/post abortion care forming 6.4% each (Figure 9).
Figure: 9 Services accessed by adolescents

4.10 Reasons for not utilizing adolescent health care services

A larger proportion 40.36% of adolescents did not utilize any adolescent health care service in the past one year because they felt they had no reason to use the service. Others also had a reason to visit but the following were factors that prevented them from using the services: some respondents did not use the service because their parents would not allow them 18.92%, a number of them could not afford the cost of services 18.47%. Again, 17.57% did not utilize the service because they had to wait for a long time before they see a doctor, similarly, 17.57% were shy because of the sex of the health care provider. Also, 16.22% felt people will think they are bad if they are seen utilizing the adolescent health care services, 13.96% preferred to speak with friends when they had a problem rather than going to the hospital. Some respondents also felt
other people will see them and hear what is been discussed at the consulting room 13.51%. Health care providers’ not friendly and unfavorable opening and closing hours of adolescent health care centers formed 9.46% each of the reasons why respondents did not utilize the service in the past one year. A few respondents had the fear that the nurse may inform their parents about their visit 7.66%, others also thought they might meet known people there 7.21% while some felt sexual and reproductive health is meant for adults only 6.31%. Only 2.25% out the proportion that did not utilize the service felt adolescent health care services were not necessary. In all, more than half (59.64%) of the respondents who did not utilize had a purpose but were restricted due to the reasons afore mentioned (Figure 10).

Figure: 10 Reasons for no utilization
4.11 Factors influencing the utilization of adolescent health care services

From Figure 11 below, parental decision was the most common factor that influenced the utilization of adolescent health care services (40.9%). Cost of reproductive health care services also contributed 38.1%, influence from friends (31.5%), religious beliefs (23.8%), moral values (21.0%) and cultural beliefs (16.8%).

![Figure: 11 Factors influencing utilization](http://ugspace.ug.edu.gh)
The statistical analysis below (Table 3) shows the relationship between utilization and other variables considered. Sex of the respondent proved to be statistically significant to utilization of adolescent health care services (p-value 0.004). Also, the class or level of the student showed a significant association to utilization (p-value 0.019). Sexual activity was seen to be significantly associated with utilization (p-value 0.001) as well as awareness of adolescent health care services (0.001). Discussion of services with others was also of statistical importance to utilization (p-value 0.022).

Table: 3 Factors associated with adolescent health care service utilization

<table>
<thead>
<tr>
<th></th>
<th>Utilization</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>chi-square</td>
<td>p-value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>15</td>
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<td>13 (81.25)</td>
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<tr>
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Table: 3 Factors associated with adolescent health care service utilization (cont’d)

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<tr>
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<tr>
<td>16</td>
<td>1.19</td>
<td>0.3 - 4.76</td>
</tr>
<tr>
<td>17</td>
<td>1.11</td>
<td>0.29 - 4.28</td>
</tr>
<tr>
<td>18</td>
<td>1.42</td>
<td>0.37 - 5.48</td>
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<td>1.27</td>
<td>0.26 - 6.33</td>
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<tr>
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<td>Female</td>
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<td>1.31 - 4.29</td>
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<tr>
<td>Islam</td>
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<td>0.29 - 1.84</td>
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</table>

From Table 4, it was realized that, females had an increased odds of almost 3 (AOR 2.37) in the utilization of adolescent health care services as compared to males (p-value 0.006) after adjusting for other factors that could influence utilization. Moreover, after controlling for other factors, the class or level of the student appeared to be insignificant to utilization. However, students who were not sexually active were less likely (AOR 0.28, p-value 0.001) to utilize the services likewise students who were not also aware of any adolescent health care service (AOR 0.10, p-value 0.001).

Table: 4 Multivariable analysis of factors associated with utilization

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<td>1.19</td>
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<td>1.11</td>
<td>0.29 - 4.28</td>
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<td>0.37 - 5.48</td>
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<td>19</td>
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<td>0.26 - 6.33</td>
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<td>Sex</td>
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<tr>
<td>Female</td>
<td>2.37</td>
<td>1.31 - 4.29</td>
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<tr>
<td>Religion</td>
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</tr>
<tr>
<td>Islam</td>
<td>0.73</td>
<td>0.29 - 1.84</td>
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</tbody>
</table>
Table: 4 Multivariable analysis of factors associated with utilization (cont’d)

<p>| | | |</p>
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<td>SHS 3</td>
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<td>0.99 - 5.64</td>
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<td><strong>Awareness</strong></td>
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CHAPTER FIVE

DISCUSSION

This study sets out to investigate the utilization of adolescent health care services among adolescents in SHS aged 15-19 years in the Sunyani West District and to examine factors influencing the utilization. Generally, the awareness level of adolescent health care services was moderate (43.2%) this finding was not consistent with a similar study conducted in Amhara which recorded much higher awareness level where nearly all respondents knew about the services (Motuma et al., 2016). The difference could be due to more health post providing focused adolescent health services for example in clinics health centers, and hospitals. Sex, sexually active status and awareness were independently associated with utilization. Students who were not aware of the services were less likely to utilize the services as compared to their counterparts who were aware after controlling for other factors in the logistic regression. The overall utilization of adolescent health care services among adolescents aged 15-19 years in the Sunyani West District within the last 12 months was (22.0%). This is similar to a cross-sectional study conducted in Nekemte town, Ethiopia among secondary school students (Binu et al., 2018). However, this finding contradicts the findings from Harar town East Ethiopia (Motuma et al., 2016). The possible reason for this discrepancy may be due to respondent characteristics and socio-demographic background of respondents.

About half (50.35%) of the students were found to be sexually active. This result appears to be higher than studies conducted in Nekemte (Binu et al., 2018) and Nepal (Bam et al., 2015). Even though other findings may seem low, behavioral context may be masked by cultural context where premarital sex is seen as a taboo.
The commonly utilized service components were general counselling and information on reproductive health issues (85.7%), family planning and contraceptive services (14.3%) and STI testing and treatment (12.7%). These findings are somewhat consistent with findings in Mekelle (Bilal, Spigt, Dinant, & Blanco, 2015). However, lower results for family and contraceptive services were recorded for Gondar (Feleke, Koye, Demssie, & Mengesha, 2013) and Nepali (Bam et al., 2015). The difference might be linked to more implementation techniques at the local and school level which is evident in this study where the majority of students had their source of information from their schools and health care providers, which is partly related to the effort of governmental and non-governmental agencies in providing adolescent focused health care in at the community level. Conversely, the least utilized services were ANC (0.00%), abortion care (6.4%) and pregnancy care (6.4%). These findings are similar to a study conducted in Harar (Motuma et al., 2016). The least use of these services could be partly related to the cultural and religious stigma associated with pregnancy and abortion which deters young people from patronizing them even if the services are available and accessible. Little or non-use of these services could lead to unsafe abortions.

The findings of this study indicated that, adolescents in Senior High School utilized more public adolescent health care services (61.9%) as compared to private facilities. this result is similar to studies conducted in Bahir Dar (Abebe & Awoke, 2014). Possibly, the services provided in the public facilities were either free, at a minimal charge or services provided covered by health insurance which could yield more utilization.

For a successful adolescent health care service provision, it is important to deliver accurate and relevant information to the target population concerning the availability and services provided in the various facilities. In this study, school (47.6%), health care providers (33.1%) and friends
(24.2%) were found to be the main source of information about adolescent health care services which was similar to findings in Harar (Motuma et al., 2016).

The result of this study showed that the majority (78.0%) of the respondents had not utilized any adolescent health care service in the past one year due to various reasons. The most common reason for not utilizing the services was some respondents felt they had no reason to use the service (40.36%). On the other hand, the remaining who had a reason to utilize but did not may be attributed to other factors such as cost of services, health care provider characteristics, health care system and environment, privacy and confidentiality, perceptions, family and culture. For example, 18.92% were restricted by their families, 18.47% could not afford the services while 17.57% were either shy of the sex of the health care provider or were discouraged by the long waiting hours in the health care centers. These findings are consistent with findings in Bahir Dar (Abebe & Awoke, 2014) and Mtwara Tanzania (Mbeba et al., 2012). This implies that there is a need tackling community leaders, religious leaders, family and health service systems in dealing with barriers to adolescent health service utilization. The lesser percentage (2.25%) of adolescent perception that reproductive health services is meant for adults only indicates that much work has been done on the awareness creation and education on the importance of these services.

Adolescents who were sexually active were more likely to utilize adolescent health care services. This finding was supported by studies conducted in Awabel, (Ayehu, Kassaw, & Hailu, 2016) and Myanmar (Thin Zaw, Liabsuetrakul, Htay, & McNeil, 2012). The possible explanation to this was, most sexually active adolescents were more likely to be exposed to sexual reproductive health challenges which would compel them to utilize the services. This status would make sexually active adolescents more vulnerable and conscious about their reproductive health as compared to their counterparts who are not sexually active.
In this study, the sex of the respondent was found to be associated with utilization. Females were more than twice (AOR 2.37, p-value 0.006) likely to utilize adolescent health care services as compared to males even though there were more sexually active males (50.69%) as compared to females (49.31%). However, in Mekelle it was the opposite (Bilal et al., 2015). This difference could be possibly associated to the fact that, in Mekelle males often report to the centers for general information while the females go in for unwanted pregnancies and abortions.

In a nutshell, respondents indicated parental decision (40.9%) as the most common factor which they thought influenced utilization followed by cost of reproductive health care services (38.1%) and influence from friends (38.1%). This is an indication to various stakeholders on this subject matter to create a conducive environment, multi-stakeholder approach and the provision or dissemination of right information to curtail these barriers.

Anderson (1995), categorized factors influencing health services utilization into three sections according to his framework. These are the predisposing factors, enabling factors and need factors. From this study, the significant predisposing factors to utilization were awareness of adolescent health care services, sex of respondent and sexual activity. According to the study, adolescents who were more sexually active and aware of the presence of adolescent health care services were more likely to utilize the services. Females also utilized the services more as compared to their male counterparts. Moreover, the enabling factors such as cost of services, parental consent, sex of health care provider and long waiting hours were seen as reasons for no utilization of adolescent health care services. Apart from adolescents who had no reason to utilize the services, the rest did not utilize because they couldn’t afford the cost, their parents didn’t allow them, some felt intimidated by the sex of the health care provider and the amount of time that would be spent in the facility before been attended to. The most common need factors
to utilization were general counselling on reproductive issues, family planning and contraceptives, STI testing/treatment, pregnancy test and HIV testing. These were commonly found as the reasons for utilizing adolescent health care services.

5.0 Limitations

The study shared the limitations of a cross-sectional study in terms of the complexity in determining causal relationships between variables. Since some aspects of this study required respondents to remember information retrospectively, a potential limitation could be recall bias. Alternatively, socially desirable answers could be given to downplay unacceptable behaviors like premarital sex in terms of sexual activity. Finally, since 3 Senior High Schools were selected out of the five in the district, the findings cannot be generalized to the entire population of adolescents in the region or nationwide who may be diverse ethnically, socio-economically and linguistically.
CHAPTER SIX

6.1 Conclusions

This cross-sectional study among adolescents in Senior High School in Sunyani West District reveals a moderate level of awareness of adolescent health care services and a low utilization level in the past 12 months. The most frequently utilized services by adolescents were counselling and information on reproductive health issues, family planning and contraceptives as well as STI testing and treatment. The school, health care providers and friends were the major sources of information concerning adolescent health care services. Parental decision and cost of reproductive services were among the key factors that influenced the utilization of adolescent health care services. Sex, sexual activity and awareness were the factors that influenced utilization of adolescent health care services based on the multivariate analysis. This serves as a notification that there is the need for pragmatic steps and remodeling to meet the needs of this current and future generation.

6.2 Recommendations

From the findings of this research there is the need for Ghana Health Service, NGO’s and other cooperate bodies to embark on massive awareness creation on adolescent health care services available tailored to suit the needs of adolescents through multi-media campaigns, school outreach and other vantage points to meet the targeted audience.

The gap in awareness to utilization indicates that awareness creation alone might not necessarily lead to utilization. Therefore, efforts must be made by Ghana Health Service in conjunction with other stakeholders to bridge the gap by putting measures in place that will facilitate utilization and minimize mitigation factors.
Parental decision was a major factor influencing utilization of adolescent health care services. This factor cannot be underestimated since at this stage or age in life adolescents will still be leaving under the care of parents without absolute autonomy. Therefore, there is the need for parental engagement and other guardians in the quest to maximize utilization because little can be achieved when these key players are left out in the context.

Finally, in future research we propose a more robust risk factor evaluation design e.g cohort study as the findings generated in this cross-sectional study are only hypothesis-generating.
REFERENCES


research: Understanding professional and institutional stigmatization of youth with mental health problems and their families. *Administration and Policy in Mental Health and Mental Health Services Research, 37*, 61–70.


Nash, K., Malley, G. O., Geoffroy, E., Schell, E., Bvumbwe, A., & Denno, D. M. (2019). “Our girls need to see a path to the future” --perspectives on sexual and reproductive health information among adolescent girls, guardians, and initiation counselors in Mulanje,
district, Malawi, 1–13.


World Health Organization (2002). Adolescent friendly Health Services, An Agenda for Change

APPENDIX: I HEAD TEACHER’S CONSENT FORM FOR (ADOLESCENTS 15-17 YEARS)

Study Title: *Factors Influencing the Utilization of Adolescent Health Care Services among Senior High School Students in Sunyani West District.*

I acknowledge that I have read the purpose and contents of the participants’ information sheet and satisfactorily explained to me in the language I understand. I fully understand the contents and any potential implications as well as the right to withdraw from this research even after the form has been signed.

I voluntarily agree for this student to participate in this research.

………………………………………….
Head Teacher’s Name/Initials

………………………………………….  …………………………..
(Signature) (Date)

INVESTIGATOR STATEMENT AND SIGNATURE

I, certify that the participant has been given ample time to read and learn about the study. All questions and clarifications raised by the participants have been addressed.

Researcher’s name ………………………………………………………………………

Signature…………………………………………………………………………………..

Date…………………………………………………………………………………….
APPENDIX: II ASSENT FORM FOR (ADOLESCENTS 15-17 Years)

Study Title: *Factors Influencing the Utilization of Adolescent Health Care Services among Senior High School Students in Sunyani West District.*

I acknowledge that I have read the purpose and contents of the participants’ information sheet and that all questions have been satisfactorily explained to me in the language I understand (English). I fully understand the contents and any potential implications as well as my right to change my mind (ie withdraw from the research) even after I have signed this form.

I voluntarily agree to be part of this research.

…………………………………….. .............................................

(Participant’s Name/initials) .............................................

ID Code

…………………………………….. .............................................

(Participant’s Signature or Thumbprint) .............................................

(Date)

INVESTIGATOR STATEMENT AND SIGNATURE

I, certify that the participant has been given ample time to read and learn about the study. All questions and clarifications raised by the participants have been addressed.

Researcher’s name ........................................................................................................

Signature..................................................................................................................

Date.........................................................................................................................
APPENDIX: III CONSENT FORM FOR (ADOLESCENTS 18-19 Years)

Study Title: Factors Influencing the Utilization of Adolescent Health Care Services among Senior High School Students in Sunyani West District.

I acknowledge that I have read the purpose and contents of the participants’ information sheet and satisfactorily explained to me in the language I understand. I fully understand the contents and any potential implications as well as my right to change my mind (ie withdraw from the research) even after I have signed this form.

I voluntarily agree to be part of this research.

Name or initials of Participant ID Code

(Participant’s Signature) (Date)

INVESTIGATOR STATEMENT AND SIGNATURE

I, certify that the participant has been given ample time to read and learn about the study. All questions and clarifications raised by the participants have been addressed.

Researcher’s name ……………………………………………………………………………

Signature…………………………………………………………………………………

Date…………………………………………………………………………………..
APPENDIX: IV QUESTIONNAIRE

TOPIC: Factors influencing the utilization of adolescent health care services among Senior High School students in Sunyani West District.

Dear Respondent,

This is a research carried out on Senior High School students to ascertain factors that influence the utilization of adolescent reproductive health services. I would be grateful if you could take few minutes of your time to answer the questions below. Please respond to each question completely, honestly and carefully as possible. Your complete, honest and careful response will inform stakeholders to improve upon adolescent health services provided in the country. Please note that your responses and names will be treated with utmost confidentiality.

Thank you for participating in this study.

*Please circle your preferred responses and provide answers where applicable.*

<table>
<thead>
<tr>
<th>Question number</th>
<th>Questions</th>
<th>Responses</th>
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</thead>
<tbody>
<tr>
<td>Respondents ID</td>
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</tbody>
</table>

**Section 1: Socio-Demographic Information**

1. Sex
   1. Male
   2. Female

2. Age as at last birthday

3. Religion
   1. Christianity
   2. Islam
   3. Traditionalist
   4. Others (specify) ........................................

4. Class/Level
   1. SHS 1
   2. SHS 2
   3. SHS 3

5. Whom do you live with?
   1. Mother
   2. Father
   3. Both Parents
   4. Other (specify) ........................................

6. Do you have a health insurance?
   1. Yes
   2. No
   3. Expired

---

64
### Section 2

**Awareness of adolescent health care services.**

8. Do you know of any adolescent health care service close to you?
   1. Yes
   2. No  >> Section 3

9. If YES, how did you hear about it? *select as many as may apply*
   1. Friends
   2. Parents
   3. School
   4. Health care provider
   5. Church
   6. Mosque
   7. Media
   8. Non-applicable

10. Do you know where it is located
    1. Yes
    2. No

11. Is far from you?
    1. No
       < 1 hour
    2. Yes
       > 1 hour

12. What are some of the services offered there? *select as many as may apply*
    1. General Counselling
    2. Abortion care/post abortion care
    3. HIV testing and counselling
    4. STI testing/STI treatment
    5. Family planning services (including condoms)
    6. ANC Services
    7. I have no idea about the services they offer
    8. Other(s) Specify.................................

### Section 3

**Adolescent health care service utilization**

13. Have you ever discussed the service with others?
    1. Yes
    2. No

14. Who did you discuss with? *select as many as may apply*
    1. Peer group
    2. Parents
    3. Teachers
    4. Sexual partner
    5. Other (specify).................................
<p>| | | |</p>
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<thead>
<tr>
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<tbody>
<tr>
<td>15.</td>
<td>Have you visited an adolescent reproductive health service in the past one year?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. No &gt;&gt; Q18</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>If YES, was it</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Private</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Public</td>
<td></td>
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<tr>
<td>17.</td>
<td>For what purpose did you visit the adolescent health care service?</td>
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<td></td>
<td>(select as many as may apply)</td>
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</tr>
<tr>
<td></td>
<td>1. Counselling/ information on reproductive health issues</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Abortion and post abortion care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. HIV counselling and testing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Pregnancy test</td>
<td></td>
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<tr>
<td></td>
<td>5. Pregnancy care</td>
<td></td>
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<tr>
<td></td>
<td>6. STI testing and treatment</td>
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<td></td>
<td>7. Family planning and contraceptive services</td>
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<td></td>
<td>8. ANC Service</td>
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<td></td>
<td>9. Other (specify) …………………..</td>
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<tr>
<td>18.</td>
<td>If your answer to question 15 is NO, for what reason(s) haven’t you used any adolescent health care service in the past one year?</td>
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<td></td>
<td>(select as many as may apply)</td>
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<tr>
<td></td>
<td>1. I had no reason to use the service</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>I had a purpose but……….</td>
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<td></td>
<td>COST OF SERVICES</td>
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<td></td>
<td>2. I can’t afford the cost of the service</td>
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<td></td>
<td>3. They do not accept health insurance</td>
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<td></td>
<td>HEALTH CARE PROVIDER CHARACTERISTICS</td>
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<td></td>
<td>4. I am shy because of the sex of the health care provider</td>
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<td>5. The health care providers are judgmental</td>
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<td>6. The health care providers are not friendly</td>
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<td></td>
<td>HEALTH CARE ENVIRONMENT/SYSTEM</td>
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<td>7. I will have to wait for a long time before I see the doctor</td>
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<td>8. The opening and closing hours of the reproductive health service are unfavorable</td>
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<td></td>
<td>PRIVACY AND CONFIDENTIALITY</td>
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<td>9. Other people will see me and hear what I’m telling the doctor in the consulting room</td>
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<tr>
<td></td>
<td>10. The nurse may tell my parents what I came there to do</td>
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</tbody>
</table>
### PERCEPTIONS
11. I prefer to speak with friends when I have a problem rather than going to the hospital or clinic
12. Sexual and reproductive health service is meant for only adults
13. Adolescent reproductive health services are not necessary
14. People will think I am a bad girl
15. I will meet known people there

### FAMILY AND CULTURE
16. My parents will not allow me

17. Others(specify)

<table>
<thead>
<tr>
<th>Section</th>
<th>Factors influencing the utilization of adolescent health care services</th>
</tr>
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<tbody>
<tr>
<td>4</td>
<td>19. Which of the following do you think influences the utilization of adolescent reproductive health services? (select as many as may apply)</td>
</tr>
<tr>
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<td>1. Parents decision</td>
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<td>2. Morals</td>
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<td></td>
<td>3. Cultural beliefs</td>
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<td>4. Religious beliefs</td>
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<td>5. Influence from friends</td>
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<td></td>
<td>6. Cost of reproductive health care services</td>
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</tbody>
</table>

THANK YOU!
APPENDIX: V ETHICAL CLEARANCE

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Tel: +233-302-681109
Fax + 233-302-685424
Email: ghsrc@gmail.com
1st February, 2019

Linda Darko Yeboah
University of Ghana
College of Health Sciences
School of Public Health
Legon-Accra

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

<table>
<thead>
<tr>
<th>GHIS-ERC Number</th>
<th>GHS-ERC028/01/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Title</td>
<td>Factors influencing the Utilization of Adolescent Health Care Service: The Case of Senior High Schools in Sunyani West District.</td>
</tr>
<tr>
<td>Approval Date</td>
<td>1st February, 2019</td>
</tr>
<tr>
<td>Expiry Date</td>
<td>31st February, 2020</td>
</tr>
<tr>
<td>GHIS-ERC Decision</td>
<td>Approved</td>
</tr>
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</table>

This approval requires the following from the Principal Investigator:

- Submission of yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.
- Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol.

SIGNED: ........................................
DR. CYNTHIA BANNERMAN
(GHIS-ERC CHAIRPERSON)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra